WINTER HYDRATION: DRINK FOR YOUR HEALTH

KNOWLEDGE

VOL 5 | OCTOBER 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

FIGHT THE FREEZE

- TENT FIRES
- DUST LANDINGS
- DROWSY DRIVING

+



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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

LEADERS SOLDIERS CIVILIANS FAMILIES

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, analyzing and communicating actionable information to assist Leaders, Soldiers, Families and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please email comments to **safe.knowledge@conus.army.mil**.

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Knowledge provides a forum for Soldiers, Leaders and safety professionals to share best practices and lessons learned and maintain safety awareness. The views expressed in these articles are those of the author and do not necessarily reflect the official policy or position of the U.S. Army, Department of Defense or the U.S. Government. Contents are specifically for accident prevention purposes only. Photos and artwork are representative and do not necessarily show the people or equipment discussed. Reference to commercial products does not imply Army endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission; please credit the magazine and author.



MAINTAINING THE MOMENTUM

Fall is a time of change — forests transformed with brilliant hues of orange and gold, the hot, humid days of summer giving way to crisp autumn air and the promise of upcoming holidays and a new year just ahead. It's also the time of year we traditionally change command at the U.S. Army Combat Readiness/Safety Center, and I'll be handing over responsibilities as commanding general and director of Army safety later this month. But before I go, I'd like to share how proud I am of the superb job each of you has done for safety during my tenure here.

I came to the USACR/Safety Center just as our Army was making a remarkable turnaround in safety performance. Between fiscal 2005 and fiscal 2008, accidental fatalities fell nearly 30 percent even as the OPTEMPO in theater hit record highs. That incredible momentum continued into 2009 and 2010, when fatal accidents dropped to their lowest level since September 2001. And while it will be several weeks before fiscal 2011 totals are final, projections show we should be on par with the past two years.

What all of you — our Leaders, Soldiers, Family members and Civilians — have accomplished is something unprecedented in our Army's history: not just simply reducing, but slashing accidental fatalities during a time of war. We're getting better and better as an Army at engagement and standards enforcement, the two most crucial elements of safety. This is especially true on duty, where we expect double-digit reductions in most accident categories for this fiscal year. Considering the demands of two separate conflicts and the millions of duty hours performed both in theater and in garrison these past 10 years, that's truly outstanding news.

Off-duty safety remains our biggest challenge — as it has



> "We're **GETTING** better and better as an Army at **ENGAGEMENT** and **STANDARDS ENFORCEMENT**, the two most **CRUCIAL** elements of safety."

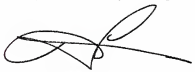
been for almost 40 years — and I encourage you to continue engaging with your Soldiers and their Family members. It's hard to enforce standards when your Soldiers aren't with you, and that's why we have to continually stress the importance of discipline and the Warrior Ethos during and after the duty day. Additionally, we must include Family members in our safety programs. No one knows a Soldier better than his or her parents or spouse, and they're the best advocates we have for safety off duty. It all goes back to fostering a holistic safety culture and instilling a safe lifestyle Soldiers carry with them wherever they go and whatever their activity.

While people are the most important tool in our safety arsenal, we can't forget about the wonderful programs that have proven effective during the past several years. Privately owned vehicle and motorcycle crashes remain the No. 1 accidental killer of our Soldiers, but we have made tremendous gains with programs like the Motorcycle Mentorship Program, the Motorcycle Progressive Training Model and Remedial Driver's Training. Commanders have the ultimate responsibility for implementing and growing programs like these, and I ask that you do everything possible to make them succeed.

Finally, please continue working with your young Soldiers to develop them into tomorrow's safety Leaders. Not that long ago, safety was a compliance-based, check-the-block requirement that was often viewed as an afterthought rather than a priority. That mindset is rapidly changing, and we now have a perfect opportunity to make safety a career-long and life-long value for the many thousands of young men and women in our ranks today. Engage with them, listen to them and learn from them — they are our Army's present and future, and we owe them the safest start possible.

Through a decade of conflict and the hardships of wartime service, each of you has proven there's no force on earth that can match the dedication and integrity of this great Army Team. We've come a long way because of you, and I look forward to hearing of even more success in the months and years ahead. It has been an honor and a privilege to serve alongside you, and you have my heartfelt thanks and eternal gratitude for everything you do to keep our Soldiers, Families and Civilians safe and ready for the fight.

Army Safe is Army Strong!



WILLIAM T. WOLF
Brigadier General, USA
Director of Army Safety

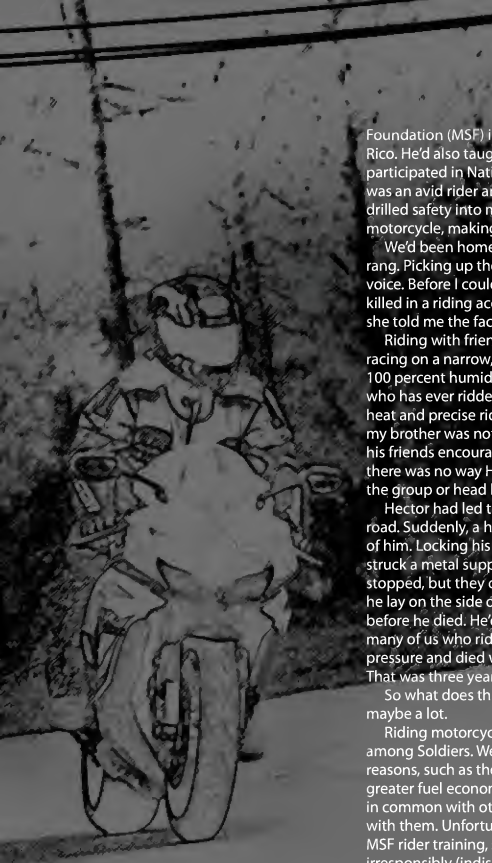
Dying to Impress

STAFF SGT. DAVID LOPEZ
U.S. Army Aeromedical Research Laboratory
Fort Rucker, Ala.

Riding down the street, I couldn't shake the feeling something was wrong. That morning, I'd decided to take my young son riding with me, but we'd only gone a couple of miles when I had a foreboding of disaster too intense to ignore. I took my son to the mall where my wife worked, planning to leave him with her while I rode the bike home. I didn't want him with me if something happened.

Unfortunately, the store where my wife worked wouldn't allow her to watch him while I rode home and then drove back. So I put him back on my bike and carefully rode home, wondering all the while what I was sensing as we cruised through the streets and intersections. I was relieved when we safely turned into the driveway. Still, I couldn't I shake this ominous feeling.

We pulled off our riding gear and went into the house. Because this was my son's first ride, I'd bought him a complete set of personal protective equipment (PPE). After all, wasn't that what my older brother, Hector, had taught me? He'd been a Motorcycle Safety



Foundation (MSF) instructor where we'd grown up in Puerto Rico. He'd also taught sport bike riding techniques and participated in National Hot Rod Association drag races. He was an avid rider and was very good at what he did. He'd drilled safety into me from the moment I purchased my first motorcycle, making sure I bought a machine I could handle.

We'd been home about 15 minutes when the phone rang. Picking up the receiver, I heard my wife's trembling voice. Before I could speak, she told me Hector had been killed in a riding accident. My fears hardened into reality as she told me the facts.

Riding with friends on their sport bikes, he'd been racing on a narrow, winding road. It was 97 F with 100 percent humidity that day in Puerto Rico. Anyone who has ever ridden in such conditions knows that heat and precise riding are fatiguing. Even though my brother was noticeably tired and dehydrated, his friends encouraged him to push his limits. And there was no way Hector would be the last rider in the group or head home before finishing the ride.

Hector had led the pack as they reached a fork in the road. Suddenly, a horse and rider trotted out in front of him. Locking his Yamaha R1's brakes, he flew off and struck a metal support wire, breaking his neck. His friends stopped, but they couldn't help him. For 17 minutes, he lay on the side of the road gasping for his breath before he died. He'd made a common mistake made by many of us who ride in groups. He'd succumbed to peer pressure and died while trying to impress his friends. That was three years ago, but I still miss him every day.

So what does this have to do with you? If you're a rider, maybe a lot.

Riding motorcycles is becoming increasingly popular among Soldiers. We buy motorcycles for practical reasons, such as their lower cost compared to cars and greater fuel economy. Riding also gives us something in common with other Soldiers who ride and bonds us with them. Unfortunately, even after taking the required MSF rider training, some Soldiers still choose to ride irresponsibly (indisciplined). Wanting to look cool, tough or be part of a group, they ignore traffic laws and ride their bikes too fast for conditions or their skills. Giving in to peer pressure and trying to fit into a group, they ride

"UNFORTUNATELY, even after **TAKING** the required MSF rider **TRAINING**, some Soldiers **STILL CHOOSE** to ride **IRRESPONSIBLY (INDISCIPLINED).**"

to the edge of their abilities and beyond.

This doesn't have to happen to Soldiers. Just like we did during deployment, we need to stick together and make sure we and our buddies make smart choices while riding. To do that, we can:

- Identify the risks and control them by using composite risk management.
- Perform preventive maintenance checks and services on our motorcycles so they're ready for the road.
- Start off riding smaller, less-powerful and less-expensive motorcycles. Only after mastering them should a rider consider something bigger, more powerful and more expensive.
- Learn from others' experiences. During group rides, pair new riders with experienced riders to transfer riding skills. This is a key element of the Army's Motorcycle Mentorship Program (MMP). If your organization or installation has an MMP, joining is a great way to build skills and camaraderie with other riders.
- Plan a route within the skills of the group's least experienced riders.
- Do a riders' brief before group rides. Brief the route and plan stopping points along the way.
- Use effective PPE when riding. A simple, long-sleeve cloth shirt will disintegrate almost immediately when it touches the pavement. Skin grafts are painful and costly.
- Avoid giving in to peer pressure. If the group is engaging in risky riding or breaking the law, choose to ride safely and obey the law. If the group leaves you behind, ride at a safe pace and catch up with them at the next stopping point.
- Ride to arrive! «

Editor's note: The author manages the MMP for the U.S. Army Aeromedical Research Laboratory.



RIDE FOR YOUR LIFE

The Motorcycle Mentorship Program establishes voluntary unit- or installation-level motorcycle associations where less experienced riders and seasoned riders can create a supportive environment of responsible motorcycle riding and enjoyment. This can create positive conduct and behavior and serve as a force multiplier that supports a commander's motorcycle accident prevention program.



MMP
MOTORCYCLE MENTORSHIP PROGRAM

Check out the USACR/Safety Center MMP website for some examples of active mentoring programs.

https://safety.army.mil/mmp/



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SEEKING HEAT?

During a fire, seconds count. That's especially true when it comes to tent fires. A fire can engulf a tent in just 10 seconds and destroy it in 60. That gives Soldiers little time to react.

MICHAEL WOOD
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For Soldiers, working and training in all weather conditions is part of the job. As the mercury begins to drop this winter, more Soldiers will seek heat from space heaters and stoves. Most of these devices will do their job properly but they'll also increase Soldiers' risks to fires. In an effort to combat these risks, the product manager, Force Sustainment Systems, manages a family of space heaters authorized for use by Army units. Units alerted for deployment should assess their environmental requirements versus on-hand space heaters and order the required heaters before deployment. Approved and tested Army personnel heaters include:

- **H-45 space heater (NSN 4520-01-329-3451):** The H-45 replaces the old potbelly M-1941. The H-45 will heat general-purpose and TEMPER tents and burns liquid and solid fuels

- **Arctic space heater (NSN 4520-01-444-2375):** The Arctic heater replaces the gasoline-burning M-1950 Yukon heater and is a lightweight, portable heater for five- and 10-man Arctic tents. The Arctic heater burns liquid and solid fuels.
- **Small space heater (NSN 4520-01-478-9207):** The small space heater is ideal for use in smaller tents such as the four-man Soldier/crew tent. It burns liquid fuel and has a built-in tank, precluding the need for an external fuel can and stand.
- **Convective space heater (NSN 4520-01-431-8927):** The convective space heater provides forced hot air for tents and shelters. This heater generates its own power and recharges its battery.
- **Thermoelectric fan (NSN 4520-01-457-2790):** The thermoelectric fan is a compact, self-powered unit that fits on top of any military tent heater. The fan uses some of the heat to turn the fan blades, which circulates heated air, improves comfort and saves fuel.

Another hazard linked with tent heaters is carbon monoxide (CO), a poisonous, colorless, odorless and tasteless gas produced as a result of the incomplete burning of natural gas and other carbon-containing materials such as kerosene, oil, propane, coal, gasoline and wood. When breathed into the body, CO enters the blood and deprives the heart, brain and other vital organs of oxygen. Low levels of CO can result in shortness of breath, mild headaches and nausea — symptoms that are often confused with food poisoning, influenza and other illnesses. At moderate levels, individuals exposed to CO may experience tightness across the chest, severe headaches, dizziness, drowsiness and nausea. Extended or high exposures may result in vomiting, confusion, muscle weakness, collapse and even death. Leaders must ensure their Soldiers are trained to recognize potential sources of CO and the symptoms of CO poisoning.

DID YOU KNOW?

From fiscal 2006 to 2008 in Iraq, the Army lost one Soldier and more than $1 million of equipment due to electrical fires. The causal factors of these fires were unlicensed, unqualified personnel installing electrical wiring to tents; the use of non-Underwriters Laboratory (UL) or European Conformité Européenne (CE) certified electrical products; and overloaded electrical circuits. Future losses can be prevented by ensuring only qualified personnel install electrical wiring to tents and facilities, conducting regular fire inspections to search for electrical hazards and providing guidance to Soldiers on electrical hazards in tents. Other measures to mitigate electrical hazards include keeping electrical connections off the ground and away from wet areas; reducing the number of electrical items plugged into receptacles; ensuring electrical extension cords aren't "daisy chained" (several extension cords connected together); and using UL and CE power cords. Fire extinguishers must also be available, fully charged and in plain sight.

Before using a space heater or stove in a tent, keep the following tips in mind:

- All heaters and stoves should be operated in accordance with the applicable technical manual.
- Place stoves in sandboxes when heating tents with wooden floors.
- Even in extreme cold, do not operate heaters at full capacity.
- Ensure tents have battery-powered smoke and CO detectors installed.
- In the event of a tent fire or suspected presence of CO, first and most importantly, evacuate the tent.

During the winter, it doesn't get much more miserable than being stuck outdoors in a tent. By following the proper precautions when using space heaters or stoves, Soldiers can ensure they'll stay warm and safe on the coldest of nights.



If you're an Army aviator, you're going to fly in the desert. It's just a matter of time. It's important for all pilots to understand dust landings and train for them. I'm not an instructor pilot (IP) or an expert on dust landings, but I did make multiple dust landings in Iraq. I'd like to share my lessons learned.

SAFE DUST LANDING

CHIEF WARRANT OFFICER 4 JOHN P. KING
81st Army Regional Support Command
U.S. Army Reserve
Huntsville, Ala.

While Army aviation operates primarily from fixed bases, the Soldier you're supporting doesn't. He is operating from a forward operating base or other type of base; however, that Soldier will be your eyes on the ground. He is your forward air controller and will be a valuable asset if you use him correctly. Remember, the ground Soldier thinks in relationship to what he knows; he is not a pilot. A 10-degree slope for him is level ground, or a landing zone (LZ) clear of all vegetation is a good LZ. Not all boundary obstacles are identified as hazards to flight. The power of your aircraft and the dust it can kick up is usually underestimated. You're responsible for the safety of your crew, passengers and aircraft, so you must adhere to the four C's for flying in the desert.

Competence

Before you ever start any type of dust training, know the basics. Know and understand the limits of your aircraft. You should understand what the instruments are telling you. This may seem like a "duh"



statement, but it is important. I'm not talking about check ride knowledge; I'm talking about understanding power requirements and aircraft limits. Hot, heavy and in the dust is not the time to hear the low-rotor horn.

I flew a UH-60A in Iraq after many years in the UH-1H and OH-58A/C. When I started flying the Black Hawk, I was amazed with its power. I never thought power would ever be a problem, but I was wrong. I was fortunate enough to have an IP who made sure I understood my aircraft. He stressed that understanding my aircraft is like target shooting — hitting the target would get me through a check ride, but I needed to aim for the bull's-eye.

Once you understand your aircraft, it's time to train. Training means in a controlled environment as close to the actual conditions in which you will fly. You must push past your comfort zone to get competent in dust landings. If you only train to a requirement, you're cheating yourself. Flying instrument flight rules (IFR) is different from flying in the clouds. Flying in light dust is different from flying in real dust conditions. Train where it's nasty and make sure you help your crew chiefs clean the aircraft afterward. Remember, training is perishable — train, train and train some more.

Cognizance

Most LZs will have a fixed pad and an accepted approach procedure. Others may have nothing more than an orange marker panel. It really doesn't matter. You still have to understand your landing environment. Do you remember all the acronyms you learned in flight school? This is where you use them. Do a high recon. Know your approach axis, obstacles (in and out) and winds. If you find a more suitable landing area, ask for it. I've even asked for smoke when I couldn't establish winds. Know where the dust cloud will form. Conduct a low recon. Look for trouble spots such as slopes, wadies or even unexploded ordnance. Look for obstacles like boulders, sheep and poles. Are there building materials, tents, tarps or portable latrines that could be blown down or sucked into your rotor system? Don't make the mistake of thinking that because you're landing to an improved area, you won't pick up dust.

Though hardened landing areas are usually better than unimproved ones, they still have the potential for dust. I remember landing to a road that turned into a dust bowl. Know what you're landing into because

when the dust begins to billow and swirl, you may momentarily lose visual references.

Do a map analysis. Remember where you land will be your next takeoff point. Keep this in mind when you go in. What will be your obstacles going out? If you're going to refuel or pick up passengers, remember your power requirements will change.

Dust landings are a lot like flying an instrument landing system approach to the ground. You pick a spot, set an approach angle and land with zero to near-zero forward speed. Your world becomes very small, very fast. It's important you have done everything to understand your touchdown point before getting into the dust cloud. This leads us into my next discussion point.

Color/Contrast

The color of the sand tells a lot about the type you're landing in. Know the difference between dark-colored and light-colored sand. Dark-colored sand is usually a better place to land. Light-colored sand seems to be finer and more likely to form dust clouds.

Vegetation is your friend. When you pick your touchdown point, make sure you have something you can use to judge closure rates and drift. I found a little bush that was no more than 15 feet off my nose at about a 30- to 45-degree angle. If I didn't have that, I would look for a sandbag, a big rock or a vehicle track. Just make sure it lies within your rotor disc area when you touch down. Because of the vortices of the rotor system, you should be able to maintain a visual contact with your reference point during the touchdown phase of your landing. If you're landing using night vision devices, visual awareness of your surroundings becomes more critical. Be prepared to temporarily lose your reference point during the approach sequence.

Crew Coordination

I flew more than 750 hours of combat time in Iraq. For the majority of the time, I flew with the same crew chiefs. Though my front-seaters changed it was the crew chiefs that provided my guidance.

In a dust landing, it takes a crew to reach the ground safely. The key to our success was communications. In our crew, the pilot not on the controls handled the radios, monitored the instruments and scanned for obstacle avoidance. One crew chief would clear the aircraft and keep a visual on the wingman. The other crew chief would clear his side and call the dust cloud. It was important the crew was able to communicate a lot of data quickly. The pilot on the controls would fly the aircraft.

Each crewmember needed to keep a visual reference to the ground. If anyone lost visual, he or she would announce it to the crew, and the pilot on the controls would confirm the communication. If everyone lost sight of the ground, the pilot on the controls would make a go-around decision. All members of the crew had a right to call a go-around. If



"It's **IMPORTANT** you have **DONE EVERYTHING** to **UNDERSTAND** your touchdown point **BEFORE GETTING** in the dust cloud."

someone other than the pilot on the controls called a go-round, it might come with directions or a description why the go-round was called. Here's how it sounds:

P: "Before landing check is complete."
P*: "Go-around is to the left, over the wires 100 feet. I have my touchdown point in sight."
CE1: "Wires. Hold your descent."
P*: "Holding."
CE1: "Chalk 2 is two discs 5 o'clock."
P: "I have a ditch 30 meters 11 o'clock."
P*: "Roger."
CE1: "Clear wires."
P*: "Cleared of wires."
CE2: "Dust forming at the tail."
P*: "Roger."
P: "Drifting left."
P*: (Response by control input.)
CE2: "Dust at the doors, I've lost the ground."
P*: "I have the ground."
CE1: "I have the ground."
CE2: "Dust is overtaking."
P*: "Still have my reference."
CE2: "I have the ground. Clear down right."
CE1: "Clear down left."

Then we would land. If a go-around was needed, it would be something like this:

CE2: "Go-around, barbwire."
P*: "Go-around." (Pilot initiates a climb)
P: "Chalk 1 is go-around (to Chalk 2)."
P: "50 feet (AGL), 800 (TGT) climbing."
(TGT limits would be called if TGT was the limiter; torque would be called if torque was the limiter.)
P: "80 feet, 846 stop collective."
P: "100 feet clear the wires, clear to go left."
CE1: "Clear left; Chalk 2 is three discs back 5 o'clock."
P: "Chalk 1 is coming left (to Chalk 2)."

As complicated as it was to land in the dust as Chalk 1, it was, in some respects, more complicated for Chalk 2. In a flight of two, the trail aircraft has to make a decision that doesn't confront Chalk 1 — whether to land with Chalk 1 or wait until he lands and the dust settles and then come in after him. The right answer is — it depends. A multi-ship landing is best accomplished with everyone landing at the same time. The trail aircraft should position itself as to maximize the benefits of the wind. If possible, Chalk 2 should position itself behind and upwind of Chalk 1 and try to touch down simultaneously with Chalk 1. If, however, you're flying to an area that is dirty or unknown, Chalk 2 may elect to delay his landing until Chalk 1 is down. This will allow you to gauge the dust and gives room to Chalk 1 if he needs to do a go-around.

This discussion would be deficient if I didn't address go-arounds. Go-arounds are free. As pilots, our No. 1 priority is the safety of the passengers and crews. If a landing doesn't feel right, do a go-around. Will your fellow pilots say something? Probably. I can tell you it took me three attempts to get into one dirty LZ. My co-pilot initiated the first go-around, and the second was by me. My brothers kidded me. I also had my crew chiefs tell me they thought I made the right decision. That was good enough for me. I value the opinions of the folks in the arena more than those watching from the cheap seats.

Army aviation is vital to the success of the mission in the Middle East. In the year I was in Iraq, my troop of eight UH-60A aircraft flew an estimated 28,000 troops. We did every type of mission, including resupply, air assaults, passenger hauling and even reconnaissance. We also provided crews to support VIP missions. In every mission, you could count on certain things: the days were long, hot and tiring and, more times than not, we had to land in dust.

I hope my experience helps those of you who are following. When you go over, please fly safe.

STOMP-ing OUT ACCIDENTS

DRIVING TASK FORCE
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

The overwhelming majority of Soldiers who die in off-duty privately owned vehicle (POV) accidents do so needlessly, according to the U.S. Army Combat Readiness/Safety Center (USACR/Safety Center). Despite the fact Soldiers are taught a disciplined approach to on-duty safety through composite risk management (CRM), accident reports identify Soldier indiscipline as the primary cause of these fatal crashes. It is obvious such training works because of the declining number of on-duty accidents. Unfortunately, many Soldiers leave CRM behind when they leave the post. The result has been an alarming increase in off-duty POV accidents, especially those involving motorcycles.





Although Leaders are engaging Soldiers on the importance of applying CRM to off-duty safety, far too many Soldiers make flawed risk decisions and suffer the consequences. Recognizing that, the USACR/Safety Center has developed the Sedans, Trucks, Off-road vehicles, Motorcycles and Pedestrians (STOMP) program. The program's goal is to develop a media campaign to provide Soldiers with constantly updated information on driving safety.

The key to STOMP is monthly Training, Indiscipline, Planning and Safety (TIPS) messages designed to help Soldiers transition the CRM training they've used on duty to the challenges they face on the road. A major component of TIPS will be monthly posters and advertisements provided electronically to Army publications. Because these will be provided in electronic form, installation publishers can modify them to suit the needs of their audience.

Why this new emphasis and program? Leaders understand their ability to directly oversee



their Soldiers' safety often ends when that Soldier drives or rides off post. The choice to be safe must also exist within the individual Soldier if off-duty POV accidents are to be reduced. STOMP and TIPS are designed to help Soldiers accurately assess their risks on the road and make wise, life-saving choices.

While the ideal goal would be an accident-free Army, that lies beyond the realm of possibility. However, what is possible is that Soldiers can take responsibility for their safety, regardless of their duty status, and dramatically reduce driving and motorcycling fatalities. STOMP and TIPS are tools designed to help make that happen.«









SEDANS

TRUCKS

OFF-ROAD VEHICLES

MOTORCYCLES

PEDESTRIANS

STOMP-ing OUT ACCIDENTS WITH TIPS

Training

Indiscipline

Proper planning

Safe driving

DRINK FOR YOUR LIFE

SGT. 1ST CLASS CHRISTOPHER BUSHWAY
U.S. Army Mountain Warfare School
Jericho, Vt.

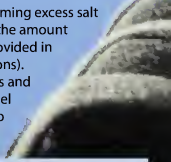
Dehydration is a leading cause of injury for Soldiers. To keep them in the fight, it's essential they remain properly hydrated — even during the winter.

The average adult loses 1½ to 2 liters of water each day. Being in a cold-weather climate can add to this water loss through the increased excretion by the kidneys, perspiration and evaporation from the lungs (the breath you see on a cold day). To make matters worse, Soldiers may be less interested in drinking water during cold weather and, as a result, become dehydrated. This can lead to inadequate blood flow to the extremities, which can contribute to a Soldier developing a cold injury such as frostbite or trench foot.

According to the U.S. Army Research Institute of Environmental Medicine, Soldiers should take the following steps to maintain adequate hydration during cold-weather operations:

- Soldiers must drink even when they are not thirsty. Leaders should establish a program of regularly scheduled hydration.
 - Soldiers should drink at least two to six canteens of water each day.
 - Cold suppresses thirst, so schedule drinking at regular intervals. Actual fluid requirements are dependent upon the level of physical work performed, the temperature and what Soldiers are wearing and carrying.
- Eating snow or ice for moisture is inefficient, may irritate the lining of the mouth and may lower body temperature. It is better to melt snow or ice and purify it before consuming.
- A cup of hot coffee or tea can be a welcome "pick-me-up" in the cold, but excessive caffeine consumption leads to difficulty sleeping, depending upon individual tolerances. Soldiers should be cautious to avoid sudden withdrawal from caffeine, however, as this can cause adverse symptoms such as severe headaches and nausea. Hot cocoa is generally a better beverage than coffee in the cold. Cocoa is warming, much lower in caffeine and high in needed carbohydrates.
- Alcoholic beverages can give a false feeling of warmth and impair judgment, which may be detrimental in the harsh cold.
- Avoid consuming excess salt (more than the amount normally provided in military rations).

First sergeants and support personnel bringing water to line units can



FYI

The adequacy of fluid intake can also be judged by urine color and volume. Dark-colored urine — orange snow instead of light yellow snow — and not needing to urinate upon awakening from a night's sleep are indicators of significant dehydration. Be aware, however, that this technique may not work for Soldiers who take vitamins, supplements or medications that discolor the urine.



usually tell if Soldiers are hydrating properly by their daily consumption. During winter, it's not unusual for Soldiers to drink a gallon of water or more each day when moving extended distances in mountainous terrain. Buddy teams must also be trained so Soldiers can encourage each other to drink plenty of water. Soldiers must understand the importance of pushing fluids before, during and after exertion.

Staying hydrated in cold weather also takes more effort than in warmer temperatures because canteens sometimes freeze. To prevent this, Soldiers should carry at least one canteen in the front chest pocket of their Gore-Tex jacket to allow body heat to keep the water from freezing. Because water freezes from the top down, the canteen should be placed upside down in the pocket. The simple act of positioning the canteen properly will ensure there is at least a quart of water always available.

For Soldiers, working and training outdoors is part of the job — no matter how extreme the temperature. Enforcing proper hydration during cold weather is one of the easiest ways to ensure Soldiers stay healthy and arrive ready to fight. «

And the Winners Are ...

The creativity of our Army's Soldiers was once again on full display in the fiscal 2011 Peer to Peer Safety Video Competition. And while there were many great submissions, three videos stood above the rest to take the year's top prizes.

The first-place video, titled "Safety Strong," was submitted by the 187th Medical Battalion at Fort Sam Houston, Texas. Through a series of short, but pointed, vignettes — each reinforcing an important safety principle — the video illustrates safety is everybody's business and no one is above the rules.

Second place this year went to Headquarters, Department of the Army, G3/5/7 Comprehensive Soldier for the video "Distracted Driving is Drunk Driving." In less than 60 seconds, the video uses a clever combination of live action and animation to demonstrate the "multitasking" that takes place behind the wheel in many vehicles on our roadways and the disastrous consequences that often come with it.

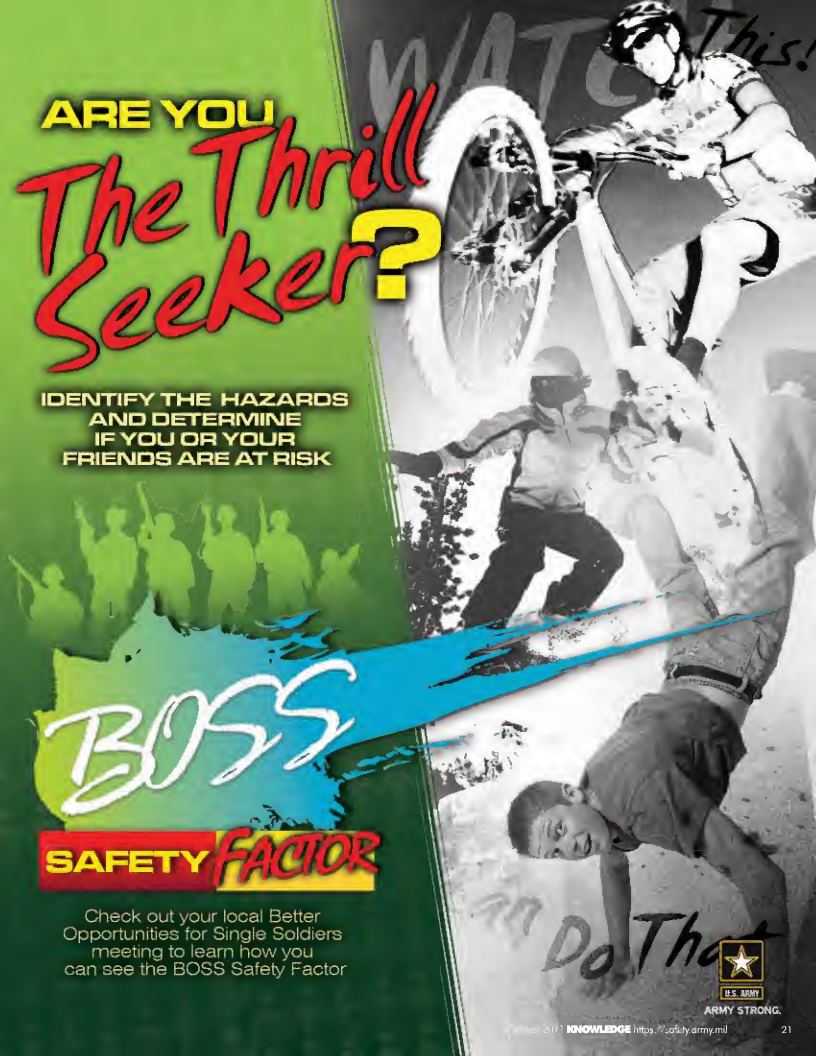
"I'm still pulling glass out of my arm." That's the essence of the video "POV Safety" — the third-place submission from the 4th Brigade Combat Team, 1st Armored Division, from Fort Bliss, Texas. The video recounts the details of a POV accident that left a Soldier with multiple injuries and a smashed vehicle, all because fatigue, inexperience and road conditions can add up to a big problem when you don't plan ahead.

The winners will receive certificates and "Safety Emmy" trophies from the U.S. Army Combat Readiness/Safety Center, as well as cash prizes from Better Opportunities for Single Soldiers to benefit their garrison BOSS chapter. Congratulations to all the winners!«





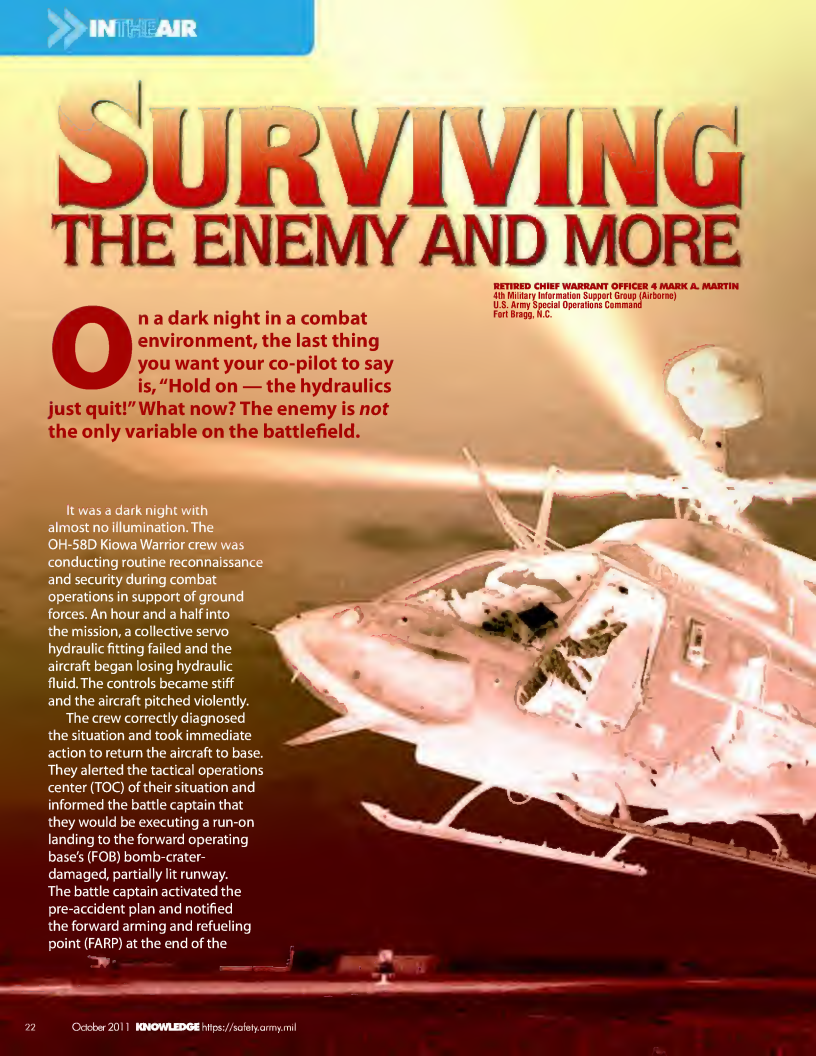



ARE YOU
The Thrill Seeker?
IDENTIFY THE HAZARDS AND DETERMINE IF YOU OR YOUR FRIENDS ARE AT RISK
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SAFETY FACTOR
Check out your local Better Opportunities for Single Soldiers meeting to learn how you can see the BOSS Safety Factor
U.S. ARMY
ARMY STRONG.

SURVIVING THE ENEMY AND MORE

RETIRED CHIEF WARRANT OFFICER 4 MARK A. MARTIN
4th Military Information Support Group (Airborne)
U.S. Army Special Operations Command
Fort Bragg, N.C.

On a dark night in a combat environment, the last thing you want your co-pilot to say is, "Hold on — the hydraulics just quit!" What now? The enemy is *not* the only variable on the battlefield.



It was a dark night with almost no illumination. The OH-58D Kiowa Warrior crew was conducting routine reconnaissance and security during combat operations in support of ground forces. An hour and a half into the mission, a collective servo hydraulic fitting failed and the aircraft began losing hydraulic fluid. The controls became stiff and the aircraft pitched violently.

The crew correctly diagnosed the situation and took immediate action to return the aircraft to base. They alerted the tactical operations center (TOC) of their situation and informed the battle captain that they would be executing a run-on landing to the forward operating base's (FOB) bomb-crater-damaged, partially lit runway. The battle captain activated the pre-accident plan and notified the forward arming and refueling point (FARP) at the end of the

runway. Despite the FOB having no other crash rescue assets, the crew chiefs, FARP personnel and others collected all available fire extinguishers and moved to the edge of the runway to await the aircraft's arrival.

In the cockpit, the pilots' training and nine months of combat experience translated into precision and calm under pressure. The dimly lit runway came into sight as they lined up for the final approach. The crew knew they had one chance to get this right.

The emergency response team waited in silence and darkness for the aircraft to touch down. The pilot expertly aligned the aircraft on the runway to narrowly miss a partially repaired bomb crater. A small shower of sparks from the skids was the only indicator that this was not a normal landing. The successful outcome of this incident was the culmination of many well-designed systems.

- **Training.** The pilots were trained and prepared to execute the appropriate emergency procedure. Additionally, the TOC personnel and battle captain understood the urgency of the situation and were trained in the pre-accident plan. First responders realized they lacked the required crash rescue resources to take appropriate steps to further protect the crew in the event the landing was unsuccessful. However, the lack of resources doesn't relieve their responsibility to provide the best possible opportunity for success. Realistic training starts at home station and must be re-evaluated and refined once in the area of operations.
- **Facilities.** Deployed units face complex hazards that, if not adequately controlled, are likely to cause loss of combat power. Leaders in a combat zone must assess all accidental hazards, as well as combat threats. In this case, leadership assessed the hazards associated with operating from an unlit runway and provided high-quality, solar-powered lights to aid the aircrew in completing a successful approach. Continuous improvements to facilities are required throughout deployment. Failure to make continued improvements or plan for remote emergencies results in an unacceptably high risk. Prioritization of efforts and appropriate allocation of assets and resources is the key to success in this area.
- **Operations.** The foundation for Army aviation operations is the air mission brief (AMB). The air mission commander makes use of the AMB and integrates composite risk management (CRM). Aircrews should leave the AMB with a clear understanding of the mission and commander's intent. A thorough and detailed AMB ensures crews have the necessary information and guidance to understand and manage the hazards they will face during the mission and ultimately accomplish their goal. The enemy is not the only variable on the battlefield. Aircrews must understand and manage both tactical and accidental risk while performing their wartime mission. It is the commander's responsibility to ensure his or her staff monitors and enforces CRM during mission execution.

Summary

Combat operations require managing the hazards associated with both tactical and accidental risk. In a combat environment, the two coexist at all times. My experience in Operation Iraqi Freedom shows that a well-trained and prepared unit can manage both successfully. CRM increases understanding at every level of the dangers associated with operating in a tactical environment. A proactive safety program lays the foundation for success in times of emergency.

FIGHT the FREEZE

BENJAMIN MINCHHOFF
U.S. Army Aviation Engineering Directorate
Fort Drum, N.Y.



Cold weather can have numerous adverse effects on Soldiers in combat. While cold injuries such as hypothermia and frostbite are serious medical problems, a Soldier's performance can be affected well before he or she is taken out of the fight. For instance, numb skin and heavy clothes hinder Soldier task performance. Soldiers also might become emotionally detached, lose motivation or be reluctant to leave their tents or sleeping bags. Fortunately, many of these problems are avoidable if Soldiers dress properly for the weather conditions.

The Army has greatly improved issued clothing and, with proper wear, Soldiers can be generally comfortable in all climates. The key is proper layering, which allows Soldiers to stay warm and dry while avoiding overheating. Any cold weather clothing ensemble consists of three layers: the base layer, insulating layer and shell. Soldiers who understand these layers can tailor their clothing to specific conditions and missions.

The Base Layer

The base layer is closest to the skin and designed to wick moisture away from the body so the wearer stays dry, warm and comfortable. The base layer's fabric and weight are very important. Cotton performs poorly in the cold because it holds moisture against the skin. Soldiers will sweat even in the cold, so cotton should be avoided at all costs.

Polypropylene, polyester and merino wool are good base layer fabrics. Issue items that work well as base layers include the Army Combat Shirt (ACS), the Fire Resistant Environmental Ensemble (FREE) Underlayer and Base Layer, and the Extended Cold Weather Clothing System (ECWCS) Light-weight and Mid-weight top and bottom. The T-shirt issued with the Army Combat Uniform is made of a wicking fabric and is also a good base layer. Many Soldiers use a wicking base layer but still wear a cotton T-shirt and drawers underneath, defeating the base layer's purpose.

Soldiers should tailor the base layer's weight to their activities and the outside temperature. For instance, they should wear a thinner base layer during high-aerobic activities and a heavier base layer during stationary activities.

The Insulating Layer

The insulating layer traps warm air against the body. Soldiers can use multiple insulating layers, depending on their activity level and the outside temperature. Light, bulky fabrics such as wool, down, polyester fleece or synthetic pile fabrics that trap air make the best insulating layers.

Army-issued items used as insulating layers include the FREE Mid-weight Layer and

FYI

Have you ever heard of COLD — the catchy acronym that describes dressing correctly for cold weather? Here's a refresher:

- **Keep clothing Clean**
- **Avoid Overheating**
- **Wear clothing Loose and Layered**
- **Keep clothing Dry**



Extreme Weather Removable Liner, field jacket liner and ECWCS Fleece. Soldiers should be slightly cold when they start out on a patrol or other strenuous activity to keep them from overheating and sweating. These Soldiers should carry their insulating layer in their rucksack and put it on when they make a stop.

The Shell

The shell protects the body and the other two layers from elements such as wind, rain, snow and dirt. A good shell is the best defense against wind and water. (Unless combined with a shell, most insulating layers do not protect against wind and rain.) Waterproof breathable fabrics, called hardshells, such as Gore-Tex are the standard by which most shells are compared.

A new category in shells has been gaining momentum recently in outdoor sports and the military. Called softshells, they are highly breathable, windproof and water resistant, but not waterproof. Softshells are designed for use in dryer climates during more aerobic activities where breathability is more important than water resistance.

Army-issued hardshells include the FREE Extreme Weather Outer Layer and ECWCS Extreme Cold/Wet Weather Jacket and Trousers. Issued softshells include the FREE Light Outer Layer and Intermediate Outer Layer, the Army Elements Fleece and the ECWCS Wind Jacket and Soft Shell Jacket and Trousers. Remember, a good shell not only protects against wind and water, it also breathes to let perspiration escape.

At Night

These layering principles also apply to boots, gloves, headgear and sleeping systems. The Army Modular Sleep System has three parts that generally follow the three-layer system and should be tailored to specific sleeping conditions.

Soldiers don't have to wear a lot of clothes at night to stay warm. Physical training shorts and a wicking T-shirt (not cotton) will be sufficient in most conditions if the sleep system is used properly. Additionally, use of a sleeping pad is very important to insulate the body from the cold air or ground beneath.

A word of caution when selecting layers for combat vehicle crews and aviation crews: Many issue items are not fire resistant. When performing duty outside the wire, stick to approved fire-resistant garments (e.g., ACS, FREE and AEF).

Individual Soldiers' backgrounds and physical attributes also greatly influence their cold weather tolerance. While one Soldier might be comfortable wearing light layers during a mission, another might need heavier layers for the same conditions. Leaders need to take this into consideration before deciding on a one-size-fits-all approach to duty uniforms and allow for some flexibility.

The Army will continue to work and fight in cold weather. Remember the principles above and keep in mind they work not only for combat, but also for off-duty outdoor activities such as hiking, skiing, hunting, running or sitting in the bleachers at a football game. Cold weather doesn't have to be a hindrance. Take advantage of Army-issued equipment and stay ready for the fight.



ARE YOU READY?

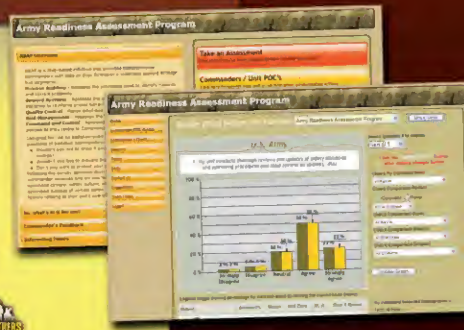
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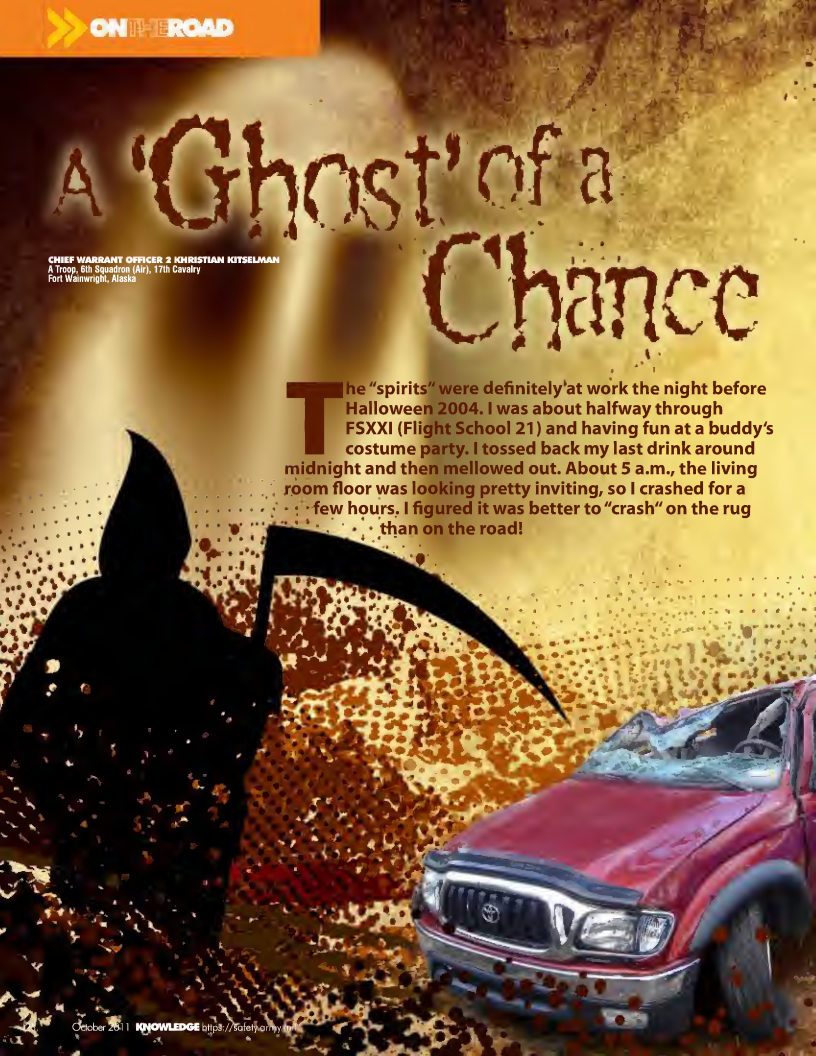
ARMY STRONG

I BAND OF BROTHERS & SISTERS

A 'Ghost' of a Chance

CHIEF WARRANT OFFICER 2 KHRISTIAN KITSELMAN
A Troop, 6th Squadron (Air), 17th Cavalry
Fort Wainwright, Alaska

The "spirits" were definitely at work the night before Halloween 2004. I was about halfway through FSXXI (Flight School 21) and having fun at a buddy's costume party. I tossed back my last drink around midnight and then mellowed out. About 5 a.m., the living room floor was looking pretty inviting, so I crashed for a few hours. I figured it was better to "crash" on the rug than on the road!



Four hours later, I woke up. The party was definitely over and it was time to go home. I made the drive, took a shower and collapsed in the sack for a couple more hours of sleep. Those Halloween "spirits" can be real devils, don't you know?

About 11 a.m., I was feeling pretty good — except for my stomach, which was growling. I hopped into my red 2003 Toyota Tacoma TRD pickup for the 30-minute drive from Enterprise, Ala., to Dothan. I spent an hour at the mall, hit the food court and then headed back to Enterprise on Highway 84. It was now Halloween Day, and the spirits had something "special" in store for me.

Being a Sunday, traffic was light compared to weekdays when vehicles often moved in herds and the posted 65-mph speed limit was merely considered a "suggestion." The only other drivers on the highway were a couple of off-duty Army medics following along behind me. I didn't know who they were then, but I'd get to know them later. It was about to be "trick-or-treat" time — and I was totally clueless!



Trick!

As my eyes slowly closed and I drifted off to Oz, the medics' eyes quickly widened as I drifted off the road. According to them, my truck veered to the right and then made a sharp left turn before hitting a road sign. When my front tire hit the grassy median dividing the lanes, the Toyota began flipping. Luckily for me, every time my truck hit the ground it was on the passenger side. When my truck stopped doing tricks (can anyone say, "Rollover, Toyo?"), I crawled out of what was left to survey the damage. The Tacoma was trashed and I wasn't feeling all that well either.

Treat!

Remember the medics? After watching my Halloween highway hijinks, they stopped to see if I was still among the living. They convinced me I'd closed the gap between this world and the next sufficiently that I'd best stay still and await the ambulance. In due time, the emergency medical technicians arrived, strapped me to a stretcher and hauled me to the hospital which, fortunately, was nearby. However, the "treats" were only just beginning.

As they rolled me into the emergency room, I looked like a monster. Half of my left ear was hanging by a scrap of flesh, and I had a large bruise across my chest. In fact, the bruises were more than skin deep — they went all the way to my stomach and lungs. Then there was the dislocated rib and muscle strain that left me contorted and moaning like a zombie. And it wasn't even Halloween night yet!

Fortunately, despite all the injuries, this Halloween tale ultimately ended with my body and spirit still intact. I can credit that to having gotten into the habit of wearing seat belts years ago. Without them, I wouldn't have had a "ghost" of a chance.

There are lots of excuses people make for not wearing their seat belts. You've probably heard some of them, things such as:

- They're uncomfortable.
- I'm only going down the road.
- I'm a safe, careful driver.
- I'll just brace myself.
- I'm afraid I'll be trapped inside the car.
- I've got an air bag.
- It'll wrinkle my clothes.

I braced myself and ended up with strained muscles. My air bags deployed, but they didn't save me — it was my seat belt that kept me alive in the cab.

Facts are, seat belts are mandatory for front-seat occupants and, in most cases, backseat passengers in all but one state. And if you're a Soldier, you know it's not optional. Uncle Sam wants you, and he wants you in one piece!

So, how about you this Halloween? Will you drive by the rules or fly with the ghouls? Personally, I'd rather skip the tricks and enjoy the treats.



Who Needs a Shot of Adrenaline?

NAME WITHHELD BY REQUEST

As Army aviators, we strive to prepare ourselves for any emergency situation we may encounter. Many hours are spent in the aircraft practicing emergencies to the extent regulations allow. We study Chapters 5 and 9 of our operator's manuals and spend hours in our respective simulators practicing emergency procedures and scenarios. Many of us reach a level of confidence that makes us think we can handle just about anything. Combine that confidence with the good fortune of never experiencing a serious emergency, and your guard may slip a little.



Flight simulators are great tools for emergency procedures and mission training. However, after a while, the simulator can become routine — if you let it. In the back of your mind, you know you can't get physically hurt. How many dual-engine or tail rotor failures have you performed in the "box" and walked away? Do you treat emergencies in the simulator with the same intensity you would in the aircraft? It's too bad a flight simulator can't give you that shot of adrenaline when an actual emergency occurs. That extra jolt adds another aspect to your decision-making process. Here's my story:

The mission was a day, live-fire exercise in support of U.S. Air Force A-10s conducting graduate instructor pilot training for their Joint Air Attack Team (JAAT) phase. The original plan called for two sorties of two Apaches, each providing attack helicopter support against an armored column and surface-to-air missile threats. Our aircraft was scheduled to be part of the first sortie, but due to maintenance problems, we were unable to make the first turn.

Maintenance repaired the aircraft, and we joined the second flight to get some valid training. The mission brief had been conducted earlier in the day. Since we were originally scheduled for the first mission, we hadn't put emphasis on the second mission portion of the brief. My commander and I thought this wouldn't be a problem because it was a day mission and we had already flown parts of the range earlier in the week.

We completed the brief with the second flight, ran up and departed on time as Chalk 3. Because of his previous JAAT experience, my commander was the air mission commander (AMC). We were armed with white phosphorus rockets but no 30 mm ammunition.

As we entered the range, we received a call from the Air Force instructor that we were shifting engagement areas and targets due to range issues. There just went a large part of pre-mission planning. We received the updated mission data and pressed on. It was a longer flight than originally planned, so fuel management was critical.

When we arrived at our firing position, the radios were already busy. The A-10s were ready. We talked to the ground forward air controller and simulated artillery to expedite getting set in our firing position. The AMC in the front seat received a situation report, and we began to run the mission. Because

FYI

In an effort to better serve the aviation community, the U.S. Army Combat Readiness/Safety Center's Air Task Force has launched a new tool with a familiar name — Flightfax. The intent of this online-only publication is to provide Army aviators with a monthly look at near-term accidents, aviation safety issues and a "blast-from-the-past" article from the Flightfax archives. To view the site, go to https://safety.army.mil and click on the Flightfax link under the Flight Safety tab. You will need an AKO password to access the page. For more information, contact the Air Task Force at DSN 558-3530 (334-255-3530) or email airtaskforce@conus.army.mil.

of the sense of urgency, I didn't take the time to do a proper assessment of our firing position (maneuvering altitude, fly-away plan, etc.) and brief the AMC because I was too focused on acquiring targets, looking for the A-10s and trying to help the AMC. The A-10s made their runs as we engaged our targets, covering their egress.

About 10 minutes into the engagement, I heard two loud reports at the rear of the aircraft and thought I felt a vibration in the flight controls. I started to ask the AMC if he had heard the noise when he cut me off. He shouted, "That's us, that's us!" I guess he heard the same thing. I immediately nosed the aircraft over to establish forward flight. I then asked myself, "Where am I going?" Here comes the adrenaline. We had two Apaches firing rockets on our right, A-10s to our front ingressing and egressing from the left and right, and our firing position was backed up against some tall hills behind us and immediately to our left. We still had no idea what was wrong with our aircraft.

I quickly decided I was going to land. I let my AMC know of my intentions, picked a landing spot off the nose of the aircraft and shot a quick approach. However, our airspeed was too fast for the approach. On top of that, I had hastily misread the terrain. We landed firmly at about a 45-degree angle to down-sloping terrain, running left to right. After a considerable amount of ground run, I was able to bring the aircraft to a stop. The postflight inspection revealed no damage, and maintenance was unable to find or duplicate what had happened. It had to have been luck because skill or precision wasn't what got us safely on the ground.

> "It's too **BAD** a flight **SIMULATOR** can't give you that shot of **ADRENALINE** when an actual **EMERGENCY** occurs. That extra jolt **ADDS** another **ASPECT** to your **DECISION-MAKING** process."

Lessons Learned

As we headed back to the airfield, I replayed in my mind what had happened, my actions and what I could have or should have done to minimize the risks to the hazards we encountered. The list was long. The most important point was I allowed the mission changes, compressed timeline, sense of urgency and other distractions to prioritize my adherence to procedures and standards. The whole sequence of events could've been a lot less intense if I had stuck to the standards, regardless of the situation.

Like I said before — we were lucky. No one was injured (physically) and the aircraft was OK. I got another chance. My boss and I are still flying, and I always try to apply what I learned that day. The scenarios in the "box" are no longer routine or repetitive. Simulators are unpredictable but realistically challenging. You're definitely going to get a shot of adrenalin with in-flight last-minute changes; but that's OK, I really don't need another one.



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Leader's Corner

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Left, Right, Left

NAME WITHHELD BY REQUEST

"Left, right, left" — no, we're not talking marching cadence here; we're talking about where smart drivers will be looking before sticking their noses into an intersection. Sure, it's common sense, but that doesn't mean it doesn't have to occasionally be "drilled" into the brains of some of us thicker-headed folks.



It was 1 p.m. on a perfect winter day in North Dakota. The sun was shining, the skies were blue and the roads were clear — you couldn't have asked for better driving conditions. I'd just finished gassing up my car and paying the bill. I'd gotten back in, bucked up (which probably saved my life) and pulled out of the station to head home.

Arriving at a familiar intersection, I stopped and then looked left and right. Everything looked clear, so I hit the pedal and started pulling forward. Imagine my surprise when suddenly a car T-boned me on my driver's side door, breaking my arm and shoving me into the middle of the intersection. The front and side air bags "exploded" into action, breaking my nose and sending blood everywhere. Thankfully, my seat belt kept me inside the car.

It's no surprise my vehicle was totaled. Shortly after the accident, a police officer arrived and asked me what happened. I told him I'd looked both ways before pulling out and didn't see anyone coming. He asked, "Did you look left, right and then left again?"

I said, "Oops … well, uh ... no, sir, I didn't."

About then the "clue bird" landed. The "lights" came on as I realized it would've only taken a fraction of a second to take one last look to the left to be sure. Instead, to save what — a millisecond or two — I trashed my car and painfully rearranged a few body parts. And the fun wasn't over. The police officer provided me a little "memento" of the incident — a $235 ticket for failing to yield the right of way. Not exactly a perfect ending to a perfect day.

If there is one good thing about learning lessons the hard way, it's that they tend to stick. It's now "muscle memory" for me to take that second look to the left. After all, things can come at you very quickly — especially if you're not looking — and mess up your day, or worse. Let me tell you from experience, the old excuse "I never saw him" will only earn you a dirty look and a ticket from a police officer. And don't count on it getting you a lot of sympathy from the doctor, especially if he's just finished patching up your victims.

When you're stopped at an intersection, pause for a moment to recall your drill instructor's "soothing" voice barking, "Left, right, left!" as you marched down the street. It might just keep you "in-step" with safety.

> "The front and side air bags **"EXPLODED"** into action, **BREAKING MY NOSE** and sending blood everywhere. Thankfully, my **SEAT BELT KEPT ME INSIDE** the car."



AVOID 'SMELLING THE BARN'

GUNNERY SGT. STERLING B. GRAHAM
2nd Marine Division,
2nd Assault Amphibian Battalion, A Company
Camp Lejeune, N.C.

Twentynine Palms, Calif., is home to the largest training area in the U.S. Marine Corps. Unfortunately, it's also home to a lot of accidents.



As a young noncommissioned officer, it was my third trip to Mojave Viper, a combined arms exercise we participate in yearly at Twentynine Palms. The base is located in the center of the Mojave Desert, and training is extremely challenging. Knowing this, we began preparing our Amphibious Assault Vehicle platoon on vehicle, weapons and environmental safety. After three months of training, it was finally time to make our pilgrimage out west to train. This year, however, we would learn a very hard lesson.

After a long flight to California, we arrived at our new home for the next 60 days — Camp Wilson, which is located 20 miles from the main base. Camp Wilson serves as the staging area for all training units and is very basic. While there, we live in Quonset huts, eat field rations and enjoy few comforts of home. However, there is one bright spot at Camp Wilson — the Warriors Club, which serves hot chow and beer. There is little time inside of the base camp once training starts, so any free time at the end is highly anticipated.

The last few days of training were hot and fast-paced, and the Marines had performed well during the exercise. Artillery fire, machine guns and infantry all moved in unison to complete the training. Everyone "smells the barn" at the end of an operation, and completing the Mobile Assault Course was no different. Now it was time to head back to Camp Wilson to clean the weapons and enjoy the Warriors Club.

The pace of the movement should have been an indicator of things to come. The Marines were speeding through the desert mountain passes and I had to tell my driver to slow down on several occasions. Once we were back at the base camp, there was plenty of work left to complete. The vehicles had to be safely parked and cleaned, and the weapons had to be cleared and cleaned. As always, I stressed to my crew the most important rule of clearing our weapons: Never point your weapon at anything you don't intend to shoot.

I then climbed on top of my vehicle to pull the barrel out of my M2 .50-caliber machine gun, ensuring my body was out of the way. It is easy to stand in front of the barrel of the weapon to uninstall it, and all the Marines knew this. The M2 has a huge round, and if it discharged anywhere near you, it was seriously going to hurt you. As I was removing the barrel from my gun, I heard a loud bang down the line. I immediately knew it was the sound of a discharging M2. The next thing I heard was terrible — "Corpsman up!" I knew someone was hurt.

While removing the barrel of his M2, a crew chief violated one of the cardinal safety rules by standing in front of the weapon and was struck by a round that was left in the chamber. The round passed through the young Marine's chest and left a large exit wound. He was dead before he hit the top of the vehicle. To make matters worse, he had just re-enlisted and was engaged to be married.

As we sat around waiting for the commotion to subside, the fact that we had needlessly lost a brother began to hit us. The worst part was it easily could have been avoided if he had slowed down and maintained muzzle awareness. For those who were there that day, this tragedy will always be a reminder of what a weapon can do when we fail to adhere to the rules.«

FYI

Looking for more information on safe weapons handling? Visit the U.S. Army Combat Readiness/Safety Center's Range & Weapons Safety Toolbox. The site aids commanders and Leaders in the management of range operations and safe weapons handling by providing a centralized collection of resources to establish and maintain safe and effective training programs for ranges and both military and privately owned weapons. Check it out at http://safety.army.mil/rangeweaponssafety.

Get Belted!

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

"Oh, crap!" I yelled as I jammed on the brakes. An Army vehicle with four Soldiers came across the intersection from my left, violating right of way. Thanks to a tall brick wall, they couldn't see me and I couldn't see them until they entered the intersection. We were in Germany and they had deployed from Fort Carson, Colo., to participate in a field exercise. They were about to help me fulfill my mission for the day (read on to find out how).

"Wham!" — I nailed them broadside as they crossed my lane. I heard them scream and saw the vehicle briefly tip up on its driver-side wheels before it rolled off to my right. I was thrown forward maybe three inches before my shoulder strap bit into me, keeping me from being impaled on the steering wheel or eating the windshield.

After I caught my breath, I jumped out and put up a warning triangle on the road behind the Volkswagen van I was driving and checked the Soldiers inside their vehicle. They were all shaken but uninjured, thanks to the fact they'd all been wearing their seat belts.

The German police came, assessed the situation and cited the other driver for the accident. I looked at him and thought I'd hate to be him when he explains this to his first sergeant. The good part was that no one had to be taken away in an ambulance. Seat belts in both vehicles prevented that.

You know you are responsible to make sure you and any passengers riding with you are wearing seat belts. But did you know there's a wrong way to wear them? Putting them on improperly reduces their ability to protect you and can actually increase your injuries. Check out the following tips for proper wear from the National Safety Council:

Lap Belt

- Be sure the belt is snug. Slack allows room for movement before or during the crash, increasing the risk of spinal cord or head injuries.
- Be sure the belt is flat. A twisted belt concentrates the stress on a small body area, increasing the likelihood of injury.
- Sit with your seat back upright. If the seat is reclined, you can slide under the belt, strike

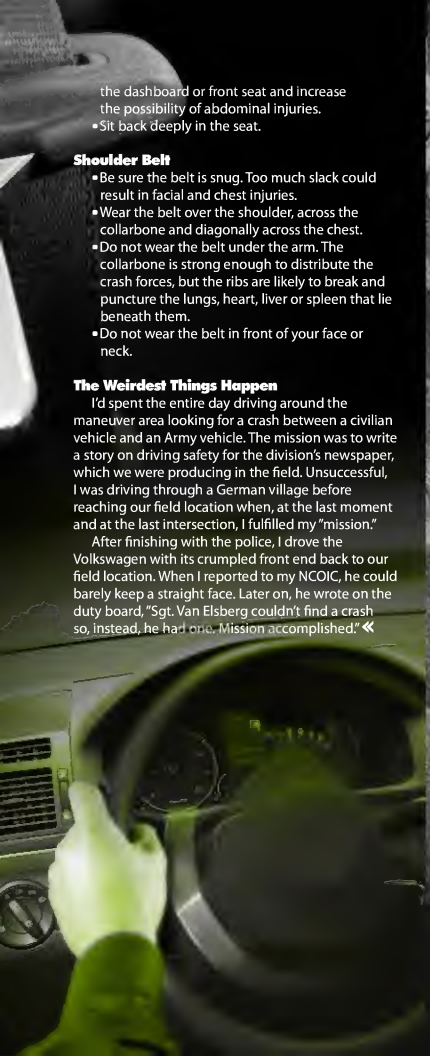
the dashboard or front seat and increase the possibility of abdominal injuries.
- Sit back deeply in the seat.

Shoulder Belt
- Be sure the belt is snug. Too much slack could result in facial and chest injuries.
- Wear the belt over the shoulder, across the collarbone and diagonally across the chest.
- Do not wear the belt under the arm. The collarbone is strong enough to distribute the crash forces, but the ribs are likely to break and puncture the lungs, heart, liver or spleen that lie beneath them.
- Do not wear the belt in front of your face or neck.

The Weirdest Things Happen

I'd spent the entire day driving around the maneuver area looking for a crash between a civilian vehicle and an Army vehicle. The mission was to write a story on driving safety for the division's newspaper, which we were producing in the field. Unsuccessful, I was driving through a German village before reaching our field location when, at the last moment and at the last intersection, I fulfilled my "mission."

After finishing with the police, I drove the Volkswagen with its crumpled front end back to our field location. When I reported to my NCOIC, he could barely keep a straight face. Later on, he wrote on the duty board, "Sgt. Van Elsberg couldn't find a crash so, instead, he had one. Mission accomplished." «



SMART

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Be a SMART SOLDIER

Be SMART. Protect yourself and those around you. The Army was built on discipline, leadership and regulations, and the regulation says someone has to ensure everyone in the vehicle wears a seat belt.

Be that SMART *someone.*

Learn more at https://safety.army.mil

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AVIATION ACCIDENT REVIEWS



Our Army continues to be engaged in combat, and it's important all Soldiers are using composite risk management to prevent accidental losses. Given the operating environment of some units and a sustained high OPTEMPO, this has been challenging. Let's take a quick look at several aviation accidents last fiscal year.

Loss of Visual Reference

While executing an approach to a partially improved helicopter landing zone (HLZ), the crew lost visual reference with the ground. The pilot on the controls stopped the descent at about five feet above ground level (AGL). The aircraft began drifting to the left, struck a small dirt berm with the main landing gear and rolled left, striking an armored bulldozer with the main rotor blades.

Lessons Learned

While engulfed in a severe dust cloud, the crew was unable to read the cockpit instruments and allowed the aircraft to drift to the left, striking the bulldozer. The pilot lacked experience. He was on his first assignment out of flight school and received only the minimum training in performing dust landings before the accident.

The pilot in command (PC) should have ensured the approach was continued to the ground or directed the landing to be aborted by executing a go-around. The PC was overconfident in the skill level of the pilot and of his own skill level.

Haste Makes Waste

While conducting an approach to hover under night vision goggles (NVG) in a low-contrast desert environment with zero illumination, the crew established a greater-than-anticipated rate of descent over down-sloping terrain to maintain a target AGL altitude. When the terrain along the route flattened out, the crew was unable to arrest the rate of descent before the bottom of the aircraft struck the ground. The aircraft incurred significant damage.

The pilot on the controls had fixated on the vicinity of the intended landing zone and failed to recognize the aircraft was in a significant descent while maintaining a constant AGL altitude. Once the aircraft was established at 150 feet AGL, the pilot shifted focus to the demanding tasks associated with performing the upcoming loss of visual reference approach to hover and did not maintain a proper scan. Subsequently, when the terrain along the flight path flattened, the pilot didn't recognize the aircraft's closure rate with the ground.

A few seconds later, the PC noticed the aircraft had descended to 100 feet AGL and warned the pilot to watch his altitude. Immediately after the warning, the low altitude audible warning sounded and the aircraft struck a 40- to 50-foot-tall sand dune. The crew applied positive thrust and regained control of the aircraft, recovering to their home airfield. The aft landing gear was severely damaged. The aircrew landed the aircraft on pallets and shut down the engines.

Lessons Learned

The pilot's actions were a result of haste. Leaders, reinforce the importance of crews maintaining proper scanning techniques in all modes of flight. Ensure crews address the adaptations necessary to maintain appropriate vertical closure rates over uneven terrain and areas of low contrast. Finally, conduct desert/mountain environmental training prior to deployment when able.

In addition, the PC, having complete confidence in the pilot, let his guard down, failing to maintain proper orientation and inadequately

DID YOU KNOW?

The U.S. Army Combat Readiness/Safety Center has produced several crash rescue videos for use in training first responders, both military and civilian. The videos feature emergency response to Army helicopter accidents and explain how to shut down aircraft engines, fuel systems and electrical systems as well as the proper and safe way to remove injured pilots and passengers from wreckage. The videos also identify the kinds of weapons and ammunition that might be onboard each type of Army aircraft and explain how to "safe" such weapons before entering danger zones. The videos are currently available online at https://safety.army.mil. You will need an Army Knowledge Online password to access the Air Task Force link. The point of contact is Perry Humble, Air Task Force Directorate, at DSN 558-9377 (334-255-9377), or email perry.calvin.humble@us.army.mil. You can also electronically order the videos through the Defense Automated Visual Information System website at http://www.defenseimagery.mil/index.html. It's unrestricted and features an easy-to-use full-text search engine that can quickly find any audiovisual production in the defense inventory.



> "By the very **NATURE** of your **WORK** as an **AVIATOR**, you engage in **HIGH-RISK** activities."

supervising the pilot during the maneuver. Aviators must avoid the tendency to let down their guard when flying with experienced crewmembers. There are many examples of highly experienced crewmembers being prevented from making mistakes by their less experienced crewmates.

Assess and Re-assess Missions

While conducting a NVG flight over water at 400 feet AGL with a ground speed of 100 knots in challenging weather conditions, the crew initiated a turn into an area void of visual references and failed to recognize the aircraft was descending and accelerating. The aircraft impacted the water in a left nose-low attitude, resulting in six fatalities and destruction of the aircraft.

Lessons Learned

During the mission planning process, there are many decisions made that affect overall mission risk. Leaders, identify hazards and make a mission risk determination through the evaluation of information such as mission objectives, weather criteria, crew selection, route planning and HLZ selection to name a few. The result is an accurate assessment of mission risk from which an execution decision is made.

It's important Leaders take every measure to reduce mission risk to the lowest possible level before the mission begins. But remember, risk management does not end with mission approval. Hazards present themselves throughout mission execution, requiring the air mission commander to continuously evaluate newly identified or evolving hazards and update the level of mission risk.

Summary

By the very nature of your work as an aviator, you engage in high-risk activities. The Army's goal is to help you mitigate risks — including those you face every day in the cockpit. Active leadership is the key to halting accidents. When Soldiers violate a procedure or standard, Leaders must take immediate action to correct the violation. In effect, failure to correct the violation sets a new, lower standard and legitimizes the shortcut. Leaders at every level must establish procedures and set and enforce standards that focus on doing things, including the routine things, the right way every time. This is something we owe our Soldiers.

Tasks, conditions and standards, standing operating procedures and regulations have been developed over time for a reason: to ensure safe, efficient operations. Taking or allowing shortcuts does not help Soldiers, nor does it help in combat. Combat requires agility of thought in planning, aggressiveness in action and persistence in execution. Enforcing standards is one of the best ways Leaders can take care of Soldiers.

If it happens ...



The often difficult and confusing task of accident reporting has just gotten easier. On Oct. 3, the U.S. Army Combat Readiness/ Safety Center releases ReportIt, a new, web-based tool that consolidates several existing Army systems into a single, user-friendly accident reporting application.

ReportIt features a pre-populated, question-based interface that allows any user, even those without previous reporting or safety experience, to perform reporting tasks. Leaders and safety professionals are still able to report injury and loss data for the total force — whether military, civilian or contractor — but with expanded capabilities that provide a more complete picture of accidental loss within our Army.

The initial ReportIt launch covers both on- and off-duty ground and manned aviation accidents. Additional releases for UAS/aerostat reporting and a portable disc for non-networked systems are scheduled through fiscal 2012.



LOST

AVIATION

AH-64D

CLASS A

- The crew experienced an in-flight emergency during cruise flight at 11,300 feet mean sea level and 85 knots indicated airspeed. The crew was able to land the aircraft; however, the aircraft incurred major damage.

CH-47D

CLASS A

- The aircraft was conducting a combat night insertion of ground troops into a non-standard helicopter landing zone when it suddenly descended while on short final and landed hard.

CH-47F

CLASS B

- The aircrew experienced severe brownout conditions and, upon touchdown, struck a ditch, causing significant damage to the forward portion of the aircraft. The front-right main landing gear was sheared off, causing damage to the structural members and airframe buckling.

CLASS C

- The crew was hover taxiing the aircraft when a parked UH-60L sustained damage from rotor wash.

MH-60L

CLASS C

- The aircraft sustained damage to the forward-looking infrared radar turret, PLS antenna and undercarriage as the result of a rapid descent.

OH-58D(R)

CLASS A

- The crew experienced a control malfunction during hovering flight, and the aircraft impacted the ground.
- The aircraft crashed during combat operations.

UAS

PUMA

CLASS C

- The unmanned aircraft (UA) was flying recon of an area and lost link with the ground control station. The UA was not recovered.

RQ-7B

CLASS C

- The UA experienced instability during landing attempts and was allowed to expend fuel before descent with the recovery chute.
- During a training flight, the UA descended due to suspected ignition/generator failure. The recovery chute deployed and the UA was recovered.
- During a recon mission, the UA experienced engine failure and crashed.
- The UA experienced engine failure and crashed. The aircraft was recovered.
- The UA experienced overtemp conditions. The flight termination system deployed; however, the aircraft sustained damage.





Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, email safe.knowledge@conus.army.mil.

GROUND

ACV



CLASS A

- Four Soldiers were killed when their Mine Resistant Ambush Protected All-Terrain Vehicle overturned during a river crossing. A fifth Soldier was able to escape the submerged vehicle and survived.

AMV



CLASS A

- A Soldier died after he was ejected from a HMMWV that overturned when he swerved to avoid an animal in the road.

Personnel Injury



CLASS A

- A Soldier died after he fell off the roof of his two-story home shop.
- A Soldier died after the privately owned vehicle he was repairing at his residence fell off the jack and pinned him underneath.
- A Soldier was found floating in a river. Attempts to revive him were unsuccessful.

DRIVING

POV



CLASS A

- Two Soldiers, one riding unbelted inside the pickup's cab and the other riding in the truck's bed, died when their vehicle went out of control and crashed on a forest road.
- An unbelted Soldier was killed when his vehicle left the road and crashed.
- An unbelted Soldier died after he was ejected from his van when it hit a fire hydrant, overturned and struck a vacant house.
- A Soldier speeding on an unlit rural route swerved to miss an animal, went off the road, struck an embankment and died when her car caught fire.
- A Soldier traveling to unit training ran off the road, struck a tree and later died after being transported to a hospital for treatment.
- A Soldier was killed when the car he was riding in ran off the road, struck trees, overturned and landed on its roof. The Soldier was riding in the backseat and wearing his seat belt.

POM



CLASS A

- A Soldier died after he ran off the road and crashed while trying to avoid a piece of wood that had fallen from a pickup ahead of him. The Soldier was wearing a helmet.
- A Soldier was killed when he lost control of his motorcycle while trying to negotiate a curve, went off the road and struck a fence. The Soldier was wearing full personal protective equipment (PPE) and had been licensed and trained.
- A Soldier was killed when he lost control of his motorcycle on a highway access ramp, slid nearly 700 feet, crashed and was thrown into a concrete barrier. At the time of the accident, the Soldier, who was wearing full PPE and was licensed and trained, was driving more than 100 mph.






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Firearms Safety Techniques, an interactive site, is available for Soldiers, Family members and Civilians to learn about off-duty safe firearms handling. Visit the site for more useful firearms safety resources.

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ARMY SAFE IS ARMY STRONG

A BAND OF BROTHERS & SISTERS

What does "Take 5" mean to you? If you're like most people, you're probably thinking "take a break." But in safety, time can be both your enemy and your friend. That's why we're asking you — wherever you are and whatever your plans — to Take 5 and think about your environment and situation. Then ask yourself one simple question:

Am I making the right decisions?

Take 5 for Safety

Five minutes, five seconds — or even shorter or longer — take the time to assess your situation and make the smart choices that can save not only your life, but also the lives of those around you.

Take 5 ... then take action.